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(12) **United States Patent**
Diepstraten et al.

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(54) **SYSTEM FOR MULTITASKING
 MANAGEMENT EMPLOYING CONTEXT
 CONTROLLER HAVING EVENT VECTOR
 SELECTION BY PRIORITY ENCODING OF
 CONTEX EVENTS**

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709/107; 712/228; 712/229

(58) Field of Search **712/228, 229;**
709/100-108

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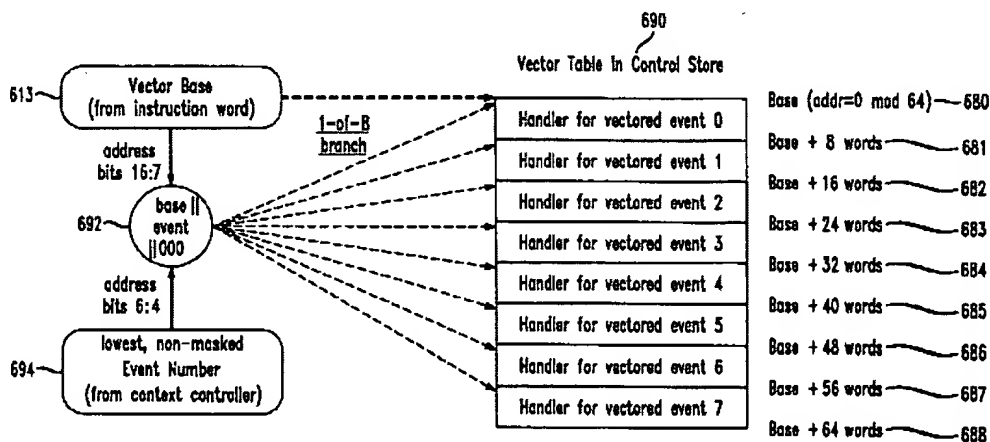
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(57) ABSTRACT

A context controller for managing multitasking in a proces-
 sor and a method of operating the same. In one embodiment,
 the context controller includes: (1) an event recorder that
 records occurrences of events and (2) an encoder, associated
 with the event recorder, that, in response to a software
 instruction, priority encodes bits corresponding to at least
 some of the events to generate therefrom an event-dependent
 vector to allow the processor to branch as a function thereof.
 Vectoring is per-instance of the vector decode software
 instruction, not per-event or per-context.

22 Claims, 21 Drawing Sheets



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